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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/992,516	11/14/2001	David A. Shafer	D6431	8007

7590 05/18/2005

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EXAMINER

WESSENDORF, TERESA D

ART UNIT	PAPER NUMBER
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1639

DATE MAILED: 05/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/992,516

Applicant(s)

SHAFER, DAVID A.

Examiner

T. D. Wessendorf

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 7 and 9-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 7 and 9-18 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Status of Claims

Claims 7 and 9-18 are pending and under consideration.

Claims 1-6, 8 and 19-54 have cancelled.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 112

Claims 7 and 9-18, as amended, are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A. There is no antecedent basis of support for "said pipette-based dispensers" at step b.

Applicants remark on 2/10/05 that claim 7 has been amended to delete "pipette-based".

In reply, not all of said terms in the claims have apparently been deleted.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 7, 9-10 and 12-18 are rejected under 35 U.S.C.

103(a) as being unpatentable over Little et al (Anal. Chem.) In view of Van Ness (6,248,521).

Little et al disclose at page 4541 a method of making a miniarray on a substrate comprising aspiration of a solution of each analyte by a piezoelectric pipette that dispenses arrays of low-nanoliter aliquots of matrix and DNA into individual etched wells on 1 in. silicon chips. For dispensing nanoliter quantities, multiple 300pL droplets were dispensed serially. After dispensing, the liquid in the piezoelectric pipette capillary was transferred into the source plate position from which it was aspirated by application of positive pressure above the capillary, rinsed by aspiration and high pressure ejection and maneuvered again to the source microtiter plate. See the details of the method at page 4541, Experimental Section up to page 4546. Little does not teach the locations or spots that have a center to center (CTC) spacing in the range of 1 mm-3mm, as claimed. Van Ness et al teach a CTC spot spacing in an array that may be 25 to 500 microns. Van Ness teaches that a variety

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of printing methods are available for applying to a solid substrate in an array pattern. As a general guideline, the delivery mechanism must be capable of position very small amounts of liquids in small regions where the regions are very close to one another (e.g., 25-500 um center-to-center distance). Note that Little suggests at paragraph bridging pages 4542 and 4543 that the array of samples generated contains elements with highly homogenous crystals approximately centered within each individual well of the chip. The spot-to-spot variability between crystal size was observed to be minimal. compared to conventional pipetting. The benefit of the uniform spot-spot characteristics is the enhanced sample preparation reproducibility apparently translated directly into a high reproducibility among the corresponding mass spectra. [Also, note applicants' disclosure at the paragraph bridging pages 41 and 42 as to the CTC distance of the spots being dependent on factors such as the well use.] It would have been obvious to one having ordinary skill in the art at the time the invention was made to make a CTC spots or locations in the method of Little in the claimed range as taught by Van Ness. Said CTC determination is a result effective variable well within the ordinary skill in the art. The benefit derived from such CTC spots is at least suggested by Little. Such benefit would provide the motivation

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to make the CTC spot location within the range as taught by Van Ness.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Little in view of Van Ness as applied to claims 7 and 9-10 and 12-18 above, and further in view of (Lange, abstract).

Little is discussed, above. Little does not disclose a disposable tips dispensers. However, Lange discloses the use of a disposable pipette (see the abstract). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use a disposable unit in the method of Brown as taught by Lange. A disposable dispenser unit would obviously produce a contamination free device for pipetting liquids. One would have been motivated to use a disposable unit since contaminants can produce false background during hybridization.

Applicants' arguments on 2/10/2005 are moot in view of the new grounds of rejection above.

No claim is allowed.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS**

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ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

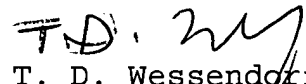
Any inquiry concerning this communication or earlier communications from the examiner should be directed to T. D. Wessendorf whose telephone number is (571)272-0812. The examiner can normally be reached on Flexitime.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Wang can be reached on (571)272-0811. The fax phone number for the

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organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


T. D. Wessendorf
Primary Examiner
Art Unit 1639

tdw
May 16, 2005